

WHAT IS CLAIMED IS:

- Sub A1
1. A liquid polymeric composition for controlled release of hydrophobic bioactive substances comprising:
- 5 (a) 1 to 30% of a hydrophobic bioactive substance;
(b) 1 to 20% of a poly(lactide-co-glycolide) copolymer; wherein the weight ratio of the poly(lactide-co-glycolide) copolymer to the hydrophobic bioactive substance is 1:1 or less; and
(c) a mixture of hydrophilic and lipophilic solvents
10 wherein the volume ratio of the hydrophilic and lipophilic solvents is from about 80:20 to about 5:95.
2. A composition of Claim 1 wherein said bioactive substance is present in about 1 to 10%.
- 15 3. A composition of Claim 1 wherein said poly(lactide-co-glycolide) copolymer is present in about 1 to 10%.
4. A composition of Claim 1 wherein the ratio of said
20 hydrophilic and lipophilic solvents is from about 65:35 to about 35:65.
5. A composition of Claim 1 which comprises:
(a) 1 to 10% of a hydrophobic bioactive substance;
(b) 1 to 10% of a poly(lactide-co-glycolide)
25 copolymer, wherein the weight ratio of the poly(lactide-co-glycolide) copolymer to the hydrophobic bioactive substance is 1:1 or less;
(c) a mixture of hydrophilic and lipophilic solvents wherein the volume ratio of the hydrophilic and lipophilic solvents is from about 65:35 to about 35:65.
- 30 6. A composition of Claim 1 which comprises:
(a) 5 to 10% of a hydrophobic bioactive substance;

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(b) 5 to 10% of a poly(lactide-co-glycolide) copolymer, wherein the weight ratio of the poly(lactide-co-glycolide) copolymer to the hydrophobic bioactive substance is 1:1 or less;

(c) a mixture of hydrophilic and lipophilic solvents
5 wherein the volume ratio of the hydrophilic and lipophilic solvents is from about 65:35 to about 35:65.

7. A composition of Claim 1 wherein said bioactive substance is selected from fipronil, the avermectins, ivermectins, eprinomectin, milbemycins, nodulisporic acid and derivatives thereof,
10 estradiol benzoate, trenbolone acetate, progesterone, and norethisterone.

8. A composition of Claim 1 wherein the ratio of lactide:glycolide of the poly(lactide-co-glycolide) copolymer is from about
15 95:5 to about 50:50.

9. A composition of Claim 1 wherein the ratio of lactide:glycolide of the poly(lactide-co-glycolide) copolymer is from about
20 75:25 to about 65:35.

10. A composition of Claim 1 wherein said hydrophilic solvent is selected from glycerol formal, glycofural, N-methyl pyrrolidone, 2-pyrrolidone, isopropylidene glycerol, di(propylene glycol) methyl ether, and mixtures thereof.
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11. A composition of Claim 1 which comprises:
(a) 5 to 10% of a hydrophobic bioactive substance;
(b) 5 to 10% of a poly(lactide-co-glycolide)
30 copolymer, wherein the ratio of lactide:glycolide of the poly(lactide-co-glycolide) copolymer is from about 75:25 to about 65:35, and the weight ratio of the poly(lactide-co-glycolide) copolymer to the hydrophobic bioactive substance is 1:1 or less;

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 (c) a mixture of glycerol formal and triacetin
 wherein the volume ratio of glycerol formal and triacetin is from about 65:35 to about 35:65.

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 12. A method for the controlled release of a hydrophobic bioactive substance in an animal, including human, which comprises injecting said animal with a liquid polymeric composition of Claim 1.

Sub A2
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 13. A liquid polymeric composition comprising:
 (1) about 1-30% of at least one bioactive substance;
 (2) about 1-20% of at least one biologically acceptable polymer, wherein the weight ratio of the polymer to the bioactive substance is 1:1 or less; and
 (3) at least one lipophilic solvent or a mixture of at least one hydrophilic solvent and at least one lipophilic solvent, wherein the volume ratio of the hydrophilic and lipophilic solvents is from about 80:20 to about 0:100, and/or wherein the lipophilic solvent is present in an amount of at least about 16.5% by weight.

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 14. A method for the controlled release of a hydrophobic bioactive substance in an animal, including human, which comprises injecting said animal with a liquid polymeric composition of Claim 13.

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